Massachusetts Bay Transportation Authority

Ferry Service Update

Fiscal and Management Control Board

December 16, 2019

John D. Ray

Ferry Service at a Glance

Three Routes

3 - Contracts

Term 4 years-7 Months – (11/1/2018 – 6/30/2023)

- Hingham F1 = $39,225,126
- Hingham – Hull - Logan F2H = $17,641,664
- Charlestown F4 = $9,286,622

Route Miles 38
37 Commuter Ferry*
1 Inner Harbor Ferry

* Commuter Ferry calculated as mileage one-way from Boston-Hingham, Hingham-Hull, Hull-Logan, and Logan-Boston

Weekday One-Way Trips 154
76 Commuter Ferry
78 Inner Harbor Ferry

Terminals 7
Parking Spaces 1,790
Weekday Boardings 5,070
Annual Ridership 1.25 million
MBTA-owned Vessels 4
Non-MBTA owned Vessels 9
Operated by Boston Harbor Cruises (BHC)

Ferry Routes

All MBTA ferry service operates within Boston Harbor

F1: Hingham-Rowes

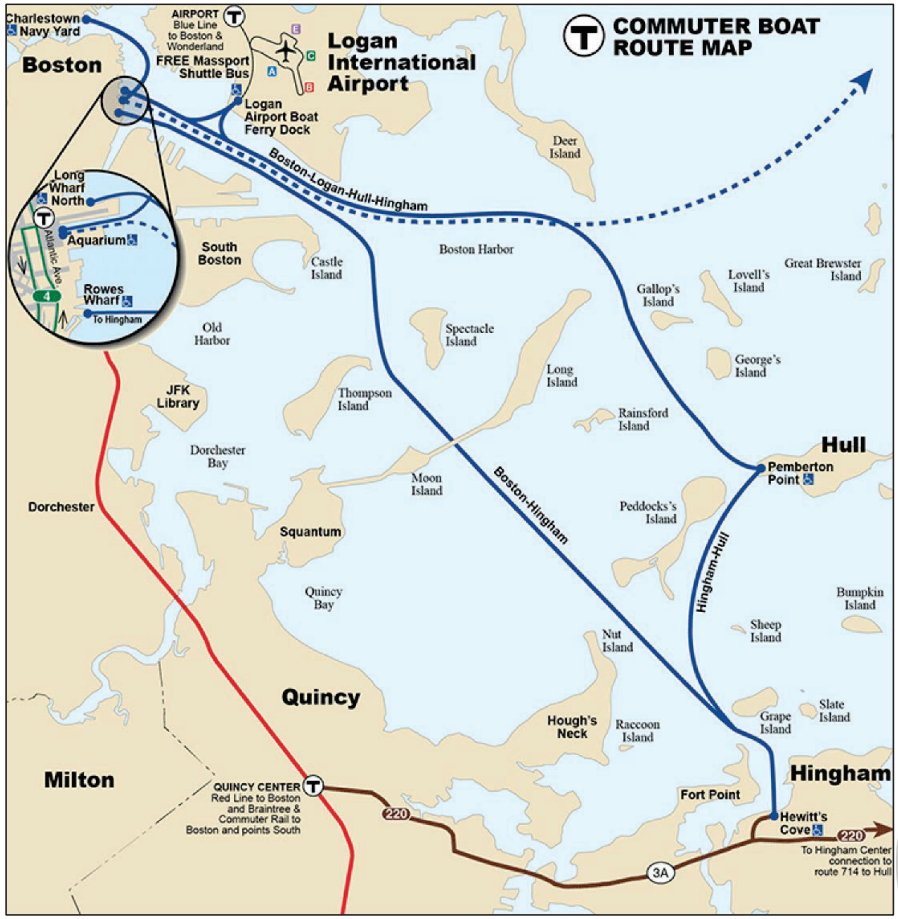
Revenue Miles: 96,408 Hours: 7,641

F2H: Hingham-Hull-Logan

Revenue Miles: 112,326 Hours: 9,698

F4: Charlestown-Long Wharf

Revenue Miles: 28,594 Hours: 5,874



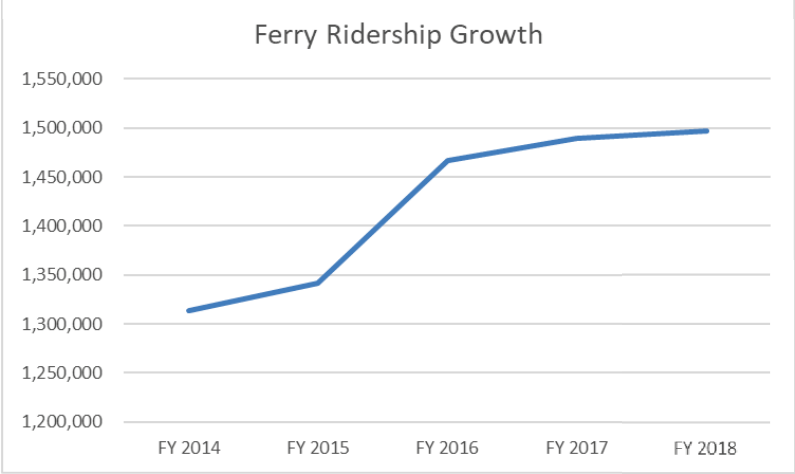
On-Time Performance

OTP is typically excellent, except during the most extreme weather conditions and dredging activities.

Service	July	Aug	Sep	Oct	Nov
F1: Hingham	93%	94%	97%	97%	97%
F2H: Hingham/Hull	94%	95%	98%	96%	98%
F4: Charlestown	100%	100%	100%	100%	100%

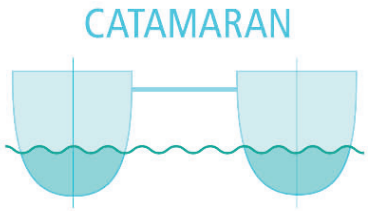
Primary factors impacting OTP:

- LNG tanker activity
- Pleasure boats
- Mechanical failures
- Ice and other weather



MBTA Owned Vessels

F2H: Hingham/Hull – Logan – Long Wharf



	Ownership	Capacity	Date built
Flying Cloud	MBTA	149	1996
Lightning	MBTA	149	1996
Glory	MBTA	149	2018
Champion	MBTA	149	2017

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Ferry Boat Overhauls: Status

Overhaul Program Schedule	Date
Draft Ferry Overhaul Specifications	Underway
Final Overhaul scope and Specification	March 2020
Ferry Boat #1 enters Overhaul Program	June 2020
Ferry Boat #1 completes and #2 enters Overhaul Program	June 2021
Ferry Boat #2 completes Overhaul Program	June 2022

Overhaul of Lighting and Flying Cloud

- Hull soundings and moisture readings – Lightning
- Preliminary condition assessment – Lightning
- Draft recommendations for overhaul scope in progress
- Preliminary development of overhaul specification
- Review maintenance records
- Obtain supplemental information from Flying Cloud
- Obtain consensus on overhaul scope
- Continue development of draft specification

Overhaul Specification

Meeting held to discuss initial recommendations

Draft being developed, sections identified.

Specification sections being assigned

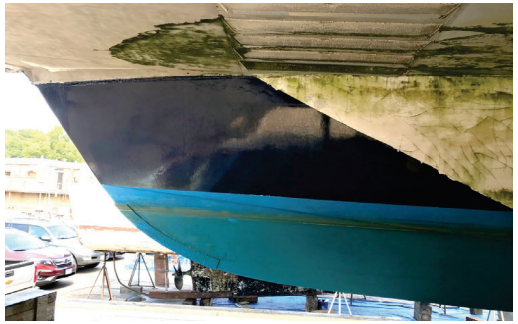
Major systems to be replaced vs. overhauled identified.

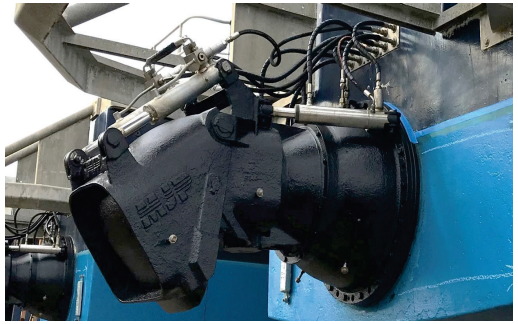
Stakeholder Coordination

Stakeholders identified and Meetings underway

Ferry Boat Overhauls: Existing Conditions Assessment

- **Preliminary Hull Assessment**
  - Hull soundings moisture readings performed
  - Additional non-destructive (Infrared) testing recommended and being scheduled
- **Main, Engines, Shafts and Jets**
  - EPA Tier II or better engines
  - Fuel tanks should be replaced
- **Electrical, Safety and Passenger Amenities**
  - Assess capacity of electrical system
  - Add Inflatable Buoyant Apparatus (IBAs)





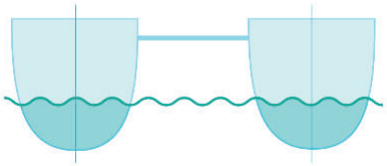
Ferry Boat Overhauls: Improvements

- Expansion of enclosed upper deck passenger
- Update each of the navigation systems
- Reconfigure pilothouse and controls
- Update the commissary area
- ADA compliant heads
- Internal environmental control systems
- Investigate adding passenger capacity

Non-MBTA Vessels

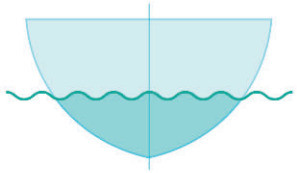
F1: Hingham – Rowes Wharf

CATAMARAN



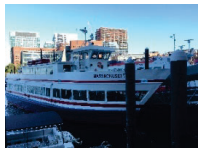
	Ownership	Capacity	Date built
Asteria	BHC	400	1998
Aurora	BHC	400	1999
Salacia (BACKUP)	BHC	600	2000

MONOHULL



	Ownership	Capacity	Date built
Massachusetts	BHC*	347	1988
Ruth E. Hughes	BHC	347	1990
Regency	BHC	347	1992

* by subcontract

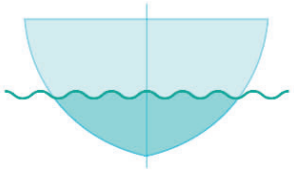


Boats for the F1 service are owned by BHC and are periodically reassigned to whale watches, lighthouse tours, and other activities

Non-MBTA Vessels

F4: Charlestown – Long Wharf

MONOHULL



	Ownership	Capacity	Date built
Rookie	BHC	149	1979
Rita	BHC	149	1982
Anna-Claire (BACKUP)	BHC	149	1982

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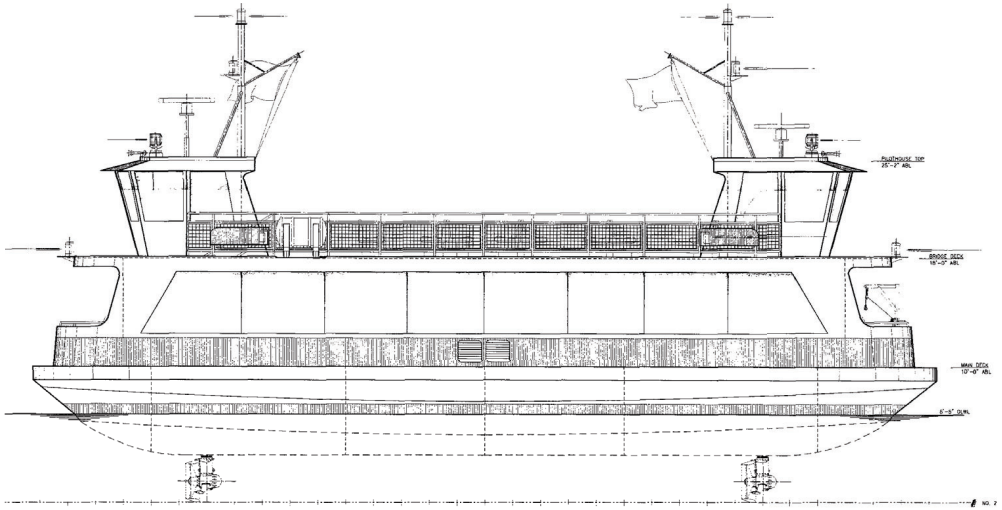
Replacement of Charlestown Boats

Current Ferry Contract contains a New Vessel Option:

- Expedited procurement
  - No decision has been made, but the opportunity exists to move quickly should the MBTA choose to exercise the option available
- Unique Operating Profile
- Hybrid possibility for Battery/ Generator propulsion
  - 2 Crew and 150 Passengers
  - Diesel-electric azimuthing propulsors (2x)
  - 750 gal fuel capacity
  - Length: 65 ft. Beam: 22 ft.
  - Depth: 6.5 ft. Draft: 3 ft.
  - 200+ horsepower generator
  - Battery bank
- BHC-managed procurement
  - BHC employs 40 full-time engineers, mechanics, welders, plumbers, and electronics and fabrication specialists



Additional Considerations

Addressing service at capacity

- MBTA will look at options to address demand that is in excess of capacity on current service
- Further investments (infrastructure and/or boats) will be needed for enhanced service

Governance

- MBTA will participate in Water Transportation Advisory Council process on governance and operating models

Service at capacity in 2019

Trips Origin Departure Time	Instances 6/1 – 10/31	PAX Left behind (Average)
Hingham 7:45AM	52	10 - 30
Long Wharf 5:30PM	26	5 - 15
Rowes/Long 3:25PM – 5:20PM	12	5 – 40 (75 peak)